MGPI of Indiana, LLC

7 Ridge Avenue

Lawrenceburg, Indiana 47025

March 27, 2014

Via Electronic Mail: TFREEMAN@idem.IN.gov

Ms. Teresa Freeman
Indiana Department of Environmental Management
100 N. Senate Avenue
Indianapolis, IN 46204

Re: Draft Part 70 Operating Permit Renewal T029-32119-00005
Draft Comments
MGPI of Indiana, LLC – Lawrenceburg, IN

Dear Ms. Freeman:

MGPI of Indiana, LLC (MGPI) is providing draft comments to the above-referenced draft Part 70 Operating Permit Renewal for our distillery in Lawrenceburg, Indiana. In addition to the list of comments provided in Attachment 1, MGPI is also providing you with copies of the draft permit text, Technical Support Document, and Potential to Emit (PTE) Calculations electronically that contain comments either inserted or included as redline mark-ups.

MGPI appreciates this opportunity to review our draft permit. We also request the opportunity to review a final draft after our comments have been addressed, prior to the start of the permit's public comment period. If you have any questions regarding our comments or would like to discuss them further, please don't hesitate to contact me at (812) 532-4158.

Respectfully submitted,

MGPI of Indiana, LLC
Randy Graves

Randy Graves
EHS Manager

Attachments
Attachment 1

MGPI of Indiana, LLC
Part 70 permit renewal draft comments
Permit T029-32119-00005

Emission Calculations provided in the Draft Technical Support Document (TSD)

1. MGPI proposes revisions to the spreadsheet emission calculations in the draft TSD, including corrections to cell references and revisions to emission factors. See "32119ca – revised.xls" for highlights indicating revisions that are requested.

2. Rail Car and Truck Loading Emissions, EU46 (Page 10 of 23 TSD App A): HAP emissions in the draft TSD are based on the following:
    - Acetaldehyde estimated to be at trace levels in ethanol (1,000 ppm max)
    - Formaldehyde estimated to be at trace levels in ethanol (1,000 ppm max)
    - Methanol concentration is based on maximum weight percent of 0.5% as per ASTM D4806 (Standard Specification for Denatured Fuel Ethanol for Blending with Gasolines for Use as Automotive Spark-Ignition Engine Fuel)

   These concentrations were not provided by MGPI in its permit renewal application. MGPI is currently checking to see if routine quality assurance sampling is conducted for these constituents. If so, MGPI can provide site-specific concentrations to IDEM and requests that the loading HAP emission rates be revised to incorporate this data.

3. Equipment Leak Fugitive Emissions, EU-81 (Page 11 of 23 TSD App A): HAP emissions in the draft TSD are based on the following:
    - Acetaldehyde estimated to be at trace levels in ethanol (1,000 ppm max)
    - Formaldehyde estimated to be at trace levels in ethanol (1,000 ppm max)
    - Methanol concentration is based on maximum weight percent of 0.5% as per ASTM D4806 (Standard Specification for Denatured Fuel Ethanol for Blending with Gasolines for Use as Automotive Spark-Ignition Engine Fuel)

   These concentrations were not provided by MGPI in its permit renewal application. MGPI is currently checking to see if routine quality assurance sampling is conducted for these chemicals. If so, MGPI can provide site-specific concentrations to IDEM and requests that the loading HAP emission rates be revised to incorporate this data.

4. Potential emissions in the draft TSD have been revised from the TSD accompanying the last Part 70 permit renewal for the following sources:
    - Conveyor – Grain unloading (EU-11 / S-103)
    - Corn Receiving and Storage system (EU-12 / S-111)
    - Grain Transport system (EU-12 / S-112)
    - Grain Storage Silos (EU-13)
    - Hammermills and Hopper (EU-14 /S-104)
    - DDGS Storage silo (EU-34 / S-341)
    - DDGS Storage silo (EU-34 / S-342)

- DDGS Surge Hopper (EU-34 / S-343)
- DDGS Surge Hopper (EU-34 / S-344)
- DDGS Rail Loadout (EU-35 / S-350)
- DDGS Truck Loadout (EU-36 / S-360)
- DDGS Rail Car Loader (EU-37 / S-370)
- DDGS Truck Loader (EU-38 / S-380)

The PTE for the above sources had been calculated by IDEM in previous permitting actions using maximum material throughputs and the appropriate AP-42 emission factors. Potential emissions have been revised in the draft TSD to instead be based on outlet grain loadings and maximum exhaust air flows. Since the operations themselves have not changed as part of this Part 70 permit renewal application, MGPI does not see a reason to change the calculation basis at this time, and requests that the methodology previously adopted by IDEM continue to be used.

5. The grain loading-based PTE calculations in item #4 above result in large increases in PTE compared to the previous permit basis. If IDEM does not revise these calculations as requested, MGPI would like to confirm that on an on-going basis actual emissions from these operations can continue to be calculated using material throughputs and AP-42 emission factors, since the grain loading-based method will overstate actual emissions.

6. HAP emissions calculated in the draft TSD for the following sources are based on information from permit T133-31145-00003, issued to POET Biorefining – Cloverdale, LLC.
    - Distillation (EU-20, 25, 29)
    - Open fermentation (EU-21)
    - Closed fermentation (EU-22)
    - Paddle screens / conveyors (EU-31 and EU-33)

    The HAP speciation used is the following:

	EU-21 / EU-22 / EU-31 & EU-33 (lb HAP/lb VOC)	Distillation (EU-20,25,29) (lb HAP/lb VOC)
• Acetaldehyde:	4.02E-03	3.03E-02
• Propionaldehyde:	2.67E-04	2.2E-03
• Methanol:	1.33E-04	2.2E-03
• Formaldehyde:	1.33E-04	2.2E-03

- The Distillation factors above were calculated from POET Biorefining T133-31145-00003 (Page 9 of 21 TSD Appendix A, Distillation scrubber uncontrolled emission rates).

- The source of the factors for open fermentation, closed fermentation, and paddle screens is not clear (data from T133-31145-00003, Page 9 of 21 TSD Appendix A results in a different set of factors from those listed above).

These factors were not provided by MGPI in its permit renewal application. MGPI is currently checking to see if stack testing at another MGPI facility has been performed for these constituents. If so, MGPI requests that the HAP emission rates for the sources listed above be revised to incorporate this data, since it would provide a better surrogate than data collected from a fuel ethanol facility.

7. Rotary dryer VOC emission estimates presented in the draft TSD are based on information from permit T133-31145-00003, issued to POET Biorefining – Cloverdale, LLC. Emissions estimates in the draft TSD quantify the water content of material entering the dryer and the VOC concentration of the water. PTE estimates assume that the entirety of the VOC content is emitted. The following inputs are used:
    - Dryer feed rate: 25.5 ton/hr
    - Water content: 66.66%
    - VOC content of the water: 0.006 lb VOC / lb water
      Values were taken from Permit T133-31145-00003 (page 11 of 21 TSD Appendix A, for VOC emissions from dryers).

The inputs other than the dryer feed rate were not provided by MGPI in its permit renewal application. MGPI is currently checking to see if testing at another MGPI facility has been performed for these constituents. If so, MGPI requests that the rotary dryer VOC emission rates be revised to incorporate this data, since it would provide a better surrogate than data collected from a fuel ethanol facility.

8. Rotary dryer HAP emissions are based on "performance tests at similar facilities", and includes the following HAP speciation taken from permit T133-31145-00003, issued to POET Biorefining – Cloverdale, LLC:
    - Acetaldehyde: 6.18% (by wt of VOC)
    - Acrolein: 0.37% (by wt of VOC)
    - Methanol: 1.24% (by wt of VOC)
    - Formaldehyde: 0.04% (by wt of VOC)

The above values were taken from Permit T133-31145-00003 (page 11 of 21 TSD Appendix A, for HAP emissions from dryers).

These inputs were not provided by MGPI in its permit renewal application. MGPI is currently checking to see if testing at another MGPI facility has been performed for these constituents. If so, MGPI requests that the rotary dryer HAP emission rates be revised to incorporate this data, since it would provide a better surrogate than data collected from a fuel ethanol facility.

<u>Permit Requirements in draft permit T029-312119-00005</u>

9. Section D.1 source listing: The following sources are contained within the listing of facility emission units in Section A.2 of the permit, but are not included in the listing of emission units in Section D.1 of the permit: (q) – (z), (aa), (dd). MGPI requests that these sources be listed in Section D.1.

10. NSPS Subpart VV applicability: The draft permit lists NSPS Subpart VV (Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for which Construction, Reconstruction, or Modification Commenced After January 5, 1981, and on or Before November 7, 2006) as an applicable requirement for EU-21 (five open fermenters installed in 2004, three open fermenters installed in 2005, and three open fermenters installed in 2006). As explained below, MGPI maintains that NSPS Subpart VV does not apply and requests that the associated requirements be removed from the permit.

    NSPS Subpart VV defines the "affected facility" as follows:

    > (a)(1) The provisions of this subpart apply to affected facilities in the synthetic organic chemicals manufacturing industry.
    >
    > (2) The group of all equipment (defined in §60.481) within a process unit is an affected facility.
    >
    > (b) Any affected facility under paragraph (a) of this section that commences construction, reconstruction, or modification after January 5, 1981, and on or before November 7, 2006, shall be subject to the requirements of this subpart.

    Process unit, as defined in 40 CFR 60.481, means the following:

    > The components assembled and connected by pipes or ducts to process raw materials and to produce, as intermediate or final products, one or more of the chemicals listed in §60.489. A process unit can operate independently if supplied with sufficient feed or raw materials and sufficient storage facilities for the product. For the purpose of this subpart, process unit includes any feed, intermediate and final product storage vessels (except as specified in §60.482-1(g)), product transfer racks, and connected ducts and piping. A process unit includes all equipment as defined in this subpart.

    Since the MGPI facility produces only a single chemical listed in 60.489, ethanol, the entire plant is effectively a single process unit for purposes of Subpart VV applicability. The affected facility is therefore the group of all equipment (defined in 60.481) within the plant. Subpart VV applicability would be triggered if the process unit (i.e., plant) were constructed, reconstructed, or modified after January 5, 1981 and on or before November 7, 2006. None of these three regulatory triggers has occurred:

    - Constructed: Operations at MGPI date back several decades; the facility was constructed well before the 1981 applicability date, with no new process units constructed since that time.

- Modified: As defined in 40 CFR 60.14, a modification is any physical or operational change to an existing facility which results in an increase in emission rate. The construction of the open fermenters in 2004, 2005, and 2006 did not result in an increased emission rate, since the PTE for EU-21 prior to these installations (permit T 029-6929, Page 2 of 16 TSD Appendix A, 10/15/1996) and the PTE for EU-21 after these installations (draft permit T029-32119-00005, Page 7 of 23 TSD Appendix A, October 6, 2013) are both 7.81 ton/yr. Therefore the installation of the fermenters did not result in a modification to the affected facility under Subpart VV.
- Reconstructed: As defined in 40 CFR 60.15, reconstruction is the replacement of components of an existing facility to such an extent that the fixed capital cost of the new components exceeds 50% of the fixed capital cost that would be required to construct a comparable entirely new facility. The fixed capital cost of the fermenter installations in 2004, 2005, and 2006 is well below 50% of the fixed capital cost that would be required to construct an entirely new facility (i.e., a new process unit that is the affected facility under Subpart VV). Therefore the installation of the fermenters did not result in a reconstruction of the affected facility under Subpart VV.

Since NSPS Subpart VV has not been triggered, Section E.2 of the draft permit does not apply. MGPI requests that Section E.2 and other references throughout the permit and TSD to Subpart VV applicability be removed.

11. Steam boiler requirements: The draft renewal applies 326 IAC 6-2-4 limits to EU-97 (as in prior permits) and also to EU-96 (unlike in prior permits). The draft permit notes that "Boiler EU-96 was modified in 2013 to burn natural gas only" which is not correct. No physical modification of EU-96 was required to enable natural-gas only combustion, and the unit historically has been permitted to combust natural gas. MGPI requests that the language referring to modification of EU-96 be removed. MGPI also requests changes to these applicable requirements in order to (1) add the particulate limit under 326 IAC 6-2-3 to EU-96, (2) remove the particulate limit under 326 IAC 6-2-4 for EU-96, and (3) revise 326 IAC 6-2-4 particulate limit for EU-97. The requested revisions are shown in MGPI's redline version of the draft permit.

12. EU-12 triggers CAM requirements for the first time in the draft permit due to the change in methodology used to calculate PTE. As mentioned in item #4 above, this operation has not changed as part of this Part 70 permit renewal application, so MGPI does not see a reason to change the calculation basis at this time, and requests that the methodology previously adopted by IDEM continue to be used to calculate PTE. EU-12 would not trigger CAM requirements, as documented previously by IDEM in the Technical Support Document for Permit T 029-24407-00005, April 15, 2008. EU-12 would continue to be subject to daily visible emission observations and pressure drop readings as documented in the existing facility Part 70 permit.

13. The baghouse pressure drop monitoring "normal" operating range is listed in several places in the draft renewal as a pressure drop between 3.0 and 9.0 inches of water.

Prior facility permits listed the range as a pressure drop between 0.5 and 5.5 inches of water, which is the correct pressure drop range that MGPI's units are designed to operate within. MGPI requests that the baghouse pressure drop monitoring "normal" operating range be revised throughout the draft permit to a pressure drop of 0.5 to 5.5 inches of water.